

Notice of Allowability

Application No.

10/776,681

Applicant(s)

FAUST ET AL.

Examiner

Ling-Siu Choi

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 08/09/2005.
2. ☒ The allowed claim(s) is/are 8-18.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>08/09/2005</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Art Unit: 1713

DETAILED ACTION

1. This Office Action is in response to the Amendment and IDS, both being filed August 9, 2005. Claims 1-7 and 19-34 were canceled and claims 8-18 are now pending.

Allowable Subject Matter

2. Claims 8-18 are allowed.
3. The following is an examiner's statement of reasons for allowance:

The present claims are allowable over the closest references: Quirk et al. [Polymer Preprints, **37**(2), 402-403, 1996].

A copolymer comprising	
A	a first polymer block that comprises a plurality of cationically polymerizable monomers
B	a second polymer block that comprises a plurality of anionically polymerizable monomers
C	a linking moiety linking the first polymer block and the second polymer block wherein the linking moiety is selected from $-(p-\phi)-C(R_1)(\phi)-$ or $-(m-\phi)-C(R_1)(\phi)-$ with R_1 being a branched, unbranched, or cyclic alkyl group or an aryl group, containing from 1 to 20 carbons

(summary of claim 8)

A copolymer comprising	
A	a first polymer block that comprises a plurality of cationically polymerizable monomers
B	a second polymer block that comprises a plurality of anionically polymerizable monomers
C	a linking moiety linking the first polymer block and the second polymer block wherein the linking moiety is selected from $-[C-C(R)(\phi)]-(p-\phi)-[C-C(R_1)(\phi)]-$ or $-[C-C(R)(\phi)]-(m-\phi)-[C-C(R_1)(\phi)]-$ with R = branched or unbranched C ₁₋₂₀ alkyl group and R ₁ = [(branched, unbranched, or cyclic) C ₁₋₂₀] alkyl group or an aryl group

(summary of claim 9)

Quirk et al. disclose a diblock polymer obtained by (a) contacting 1,3-bis (1-phenylethylene)benzene with poly(styryl)lithium and poly(butadienyl)lithium and (b) quenching with MeOH (page 402). Quirk et al. further disclose a star-branched polymer obtained by (i) contacting 1,3-bis(1-phenylethylene)benzene with poly(styryl)lithium and poly(butadienyl)lithium and then (ii) contacting the resulting product with additional styrene, butadiene, or t-butyl methacrylate monomer (pages 402-403). However, Quirk et al. do not teach or fairly suggest a copolymer or star-branched copolymer comprising a linking moiety having R **being branched or unbranched alkyl group containing 1-20 carbons** and R₁ **being branched, unbranched, or cyclic alkyl group or an aryl group, containing 1-20 carbons.**

In light of the above discussion, it is evident as to why the present claims are patentable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

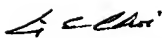
Art Unit: 1713

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reach on 571-272-1114.



**LING-SUI CHOI
PRIMARY EXAMINER**

October 26, 2005